PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference PRD2008-PCTf	**FOR FURTHER ACTION**	See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)
International application No. PCT/EP 03/11793	International filing date *(day/month/year)* 23.10.2003	Priority date *(day/month/year)* 31.10.2002
International Patent Classification (IPC) or both national classification and IPC C07K14/47		
Applicant JANSSEN PHARMACEUTICA N.V.		

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.

2. This REPORT consists of a total of 6 sheets, including this cover sheet.

   ☐ This report is also accompanied by ANNEXES, i.e. sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).

   These annexes consist of a total of sheets.

3. This report contains indications relating to the following items:

   - I ☒ Basis of the opinion
   - II ☐ Priority
   - III ☒ Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
   - IV ☐ Lack of unity of invention
   - V ☒ Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
   - VI ☐ Certain documents cited
   - VII ☐ Certain defects in the international application
   - VIII ☐ Certain observations on the international application

Date of submission of the demand	Date of completion of this report
25.03.2004	07.10.2004
Name and mailing address of the international preliminary examining authority: European Patent Office - Gitschiner Str. 103 D-10958 Berlin Tel. +49 30 25901 - 0 Fax: +49 30 25901 - 840	Authorized Officer Alconada Rodríguez, Telephone No. +49 30 25901-326

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No. PCT/EP 03/11793

I. Basis of the report

1. With regard to the **elements** of the international application *(Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17))*:

Description, Pages

1-67 as originally filed

Sequence listings part of the description, Pages

51-67 as originally filed

Claims, Numbers

1-34 as originally filed

Drawings, Sheets

1-10 as originally filed

2. With regard to the **language**, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

   These elements were available or furnished to this Authority in the following language: , which is:

   ☐ the language of a translation furnished for the purposes of the international search (under Rule 23.1(b)).

   ☐ the language of publication of the international application (under Rule 48.3(b)).

   ☐ the language of a translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

   ☒ contained in the international application in written form.

   ☒ filed together with the international application in computer readable form.

   ☐ furnished subsequently to this Authority in written form.

   ☐ furnished subsequently to this Authority in computer readable form.

   ☒ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.

   ☒ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. The amendments have resulted in the cancellation of:

   ☐ the description, pages:

   ☐ the claims, Nos.:

   ☐ the drawings, sheets:

5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed (Rule 70.2(c)).

   (Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.)

6. Additional observations, if necessary:

III. Non-establishment of opinion with regard to novelty, inventive step and industrial applicability

1. The questions whether the claimed invention appears to be novel, to involve an inventive step (to be non-obvious), or to be industrially applicable have not been examined in respect of:

   ☐ the entire international application,

   ☒ claims Nos. 1-34 (in part) and 27-34 (with respect to industrial applicability)

   because:

   ☒ the said international application, or the said claims Nos. 27-34 (with respect to industrial applicability) relate to the following subject matter which does not require an international preliminary examination (specify):

   see separate sheet

   ☐ the description, claims or drawings *(indicate particular elements below)* or said claims Nos. are so unclear that no meaningful opinion could be formed *(specify)*:

   ☐ the claims, or said claims Nos. are so inadequately supported by the description that no meaningful opinion could be formed.

   ☒ no international search report has been established for the said claims Nos. 1-34 (for the subject-matter of claims not relating to the polynucleotide of SEQ ID NO:45 or the polypeptide of SEQ ID NO:46)

2. A meaningful international preliminary examination cannot be carried out due to the failure of the nucleotide and/or amino acid sequence listing to comply with the standard provided for in Annex C of the Administrative Instructions:

   ☐ the written form has not been furnished or does not comply with the Standard.

   ☐ the computer readable form has not been furnished or does not comply with the Standard.

V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Yes:	Claims	6-34
	No:	Claims	1-5
Inventive step (IS)	Yes:	Claims	11-34
	No:	Claims	1-10
Industrial applicability (IA)	Yes:	Claims	1-26
	No:	Claims	-

2. Citations and explanations

see separate sheet

Re Item III

Non-establishment of opinion with regard to novelty, inventive step and industrial applicability

Claims 27-34 relate to subject-matter considered by this Authority to be covered by the provisions of Rule 67.1(iv) PCT. Consequently, no opinion will be formulated with respect to the industrial applicability of the subject-matter of these claims (Article 34(4)(a)(I) PCT).

Re Item V

Reasoned statement with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

Reference is made to the following documents:

D1: DATABASE GENEMBL [Online] 5 April 2001 (2001-04-05), STRAUSBERG,R. ET AL.: "Mus musculus RIKEN cDNA 1300002F13 gene, mRNA (cDNA clone MGC:6714 IMAGE:3585640), complete cds." XP002270084 Database accession no. BC005546

D2: CHRAPKIEWICZ N B ET AL: "RAT GENE 33 ANALYSIS OF ITS STRUCTURE MESSENGER RNA AND BASAL PROMOTER ACTIVITY" NUCLEIC ACIDS RESEARCH, vol. 17, no. 16, 1989, pages 6651-6668, XP001161090 ISSN: 0305-1048

Document **D1** discloses the sequence of the mouse RIKEN 1300002F13 cDNA consisting of 3034 nucleotides which shows 100% identity with the polynucleotide of SEQ ID NO:45 over its complete length. The mouse cDNA contains an ORF between nucleotides 255 and 1640 which encodes for a 462 amino acid polypeptide showing 100% identity over its whole length with the polypeptide of SEQ ID NO:46 over its whole length. Therefore, the subject-matter of **claims 1-5** is not new in the sense of Article 33(2) PCT.

Document D2 provides the sequence of the rat gene 33, which shows 89% identity in 2714 nucleotides overlap with the polynucleotide of SEQ ID NO:45. The polypeptide encoded by the rat gene 33 shows 92% identity in a 423 amino acids overlap with the polypeptide of SEQ ID NO:46. The subject-matter of **claims 1-5** can not be considered to involve an inventive step in the sense of Art. 33(3) PCT since they merely relate to

the isolation of an ortholog of a known gene which requires no inventive skills.

Claims 6-10 relate to experimental variations of the polypeptide and polynucleotide sequences of claims 1-5 which can be carried out by the skilled person with standard knowledge and standard laboratory practice and for which no inventive step can be acknowledged.

However, none of the prior art documents teach or suggest that the expression of the claimed polypeptide could be under the control of a CRH signalling. Therefore, novelty and inventive step can be acknowledged for the subject-matter of claims relating to identifying compounds able to alter CRH signalling in a cell (claims 11-26) or methods for diagnosing a CRH inducing depression (claims 27-34), which are all based in the changes in the expression of the polypeptide of SEQ ID NO:46 or of the polynucleotide of SEQ ID NO:45 in response to CRH stimulation.